SONY

Digital Audio Tape-corder

Operating Instructions page 2*EN* **EN**

Mode d'emploi page 2*F* **F**

DAT
Digital Audio Tape

WALKMAN

TCD-D100

OWNER'S RECORD

The model and serial numbers are located on the bottom of the unit.

Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. TCD-D100 Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For the customers in the U.S.A.
INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the Customers in Canada

CAUTION:
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OR PLUG TO WIDE SLOT, FULLY INSERT.

Notes on recording

- This tape-corder is not designed for business or commercial use. Never attempt to modify or tamper the tape-corder so that it can be connected to other business or commercial audio equipment. Do not use this tape-corder for data storage.
- Check and make sure that the recording operation is not malfunctioning prior to recording important materials.
- In no event shall Sony be liable for any direct, indirect, consequential or incidental damages arising from the malfunction of the recording operation of this tape-corder.
- Observe the relevant regulations on copyright relating to your collection of recordings. Unauthorized public performance, broadcasting and duplication of a recorded material for commercial purposes are a violation of applicable laws.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

Table of contents

Recording

Playback

Power Sources

Additional Information

EN

Welcome!

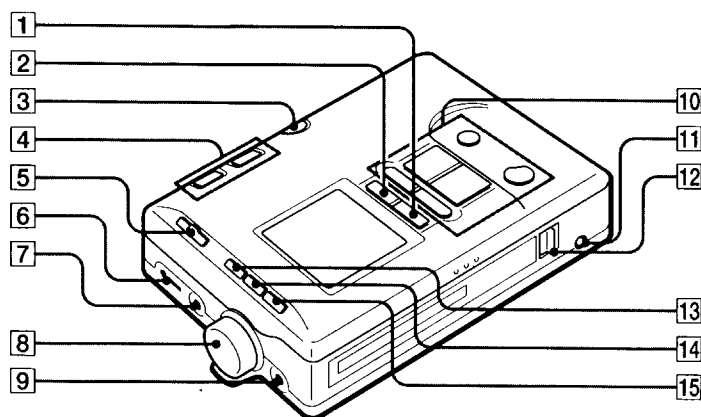Welcome to the world of the DAT tape-corder!

Your DAT tape-corder has the following features, they will be helpful for you to enjoy it to the full.

- **Superb DAT sound quality** with excellent frequency response, low noise, and lack of distortion.
- **Easy DAT operation** with high speed fast-forward/rewind and cue/review.
- **High fidelity recording** with a high quality mic amplifier also used in the Super Bit Mapping adaptor (SBM-1).
- **Long-time recording** using two Nickel metal hydride rechargeable batteries. Aproximately 3.5 hours of continuous recording.
- **Adjustable (automatic/manual) recording level** to suit every recording condition.
- **MIC LIMITER** that automatically holds down sudden large input signals to a certain level.
- **Rec mute function** that makes a four-second blank automatically.
- **Date function** that stamps date and time during recording.
- **LCD with EL (electroluminescent) illumination backlight** that indicates the current operating mode and the battery power status in the dark.
- **Digital-to-digital recording compatibility** with CD/MD players or BS/CS tuner, etc.
- **Three sampling frequencies (48/44.1/32 kHz)** that support high quality digital recording.
- **After Recording function** that lets you write and erase Start IDs and Program Numbers after recording.
- **Remote control equipped with LCD** that indicates current operating mode.
- **Serial Copy Management System (SCMS)** that indicates how many times the tape could be copied.
- **Low Power Consumption mode** that makes battery life longer. This may be operated automatically or manually.

Location and Function of Controls

Refer to the pages in ( ) for details.

Main unit —front side

[1] START ID•MODE button

[2] START ID•ENTER button

[3] LIGHT button

Press to illuminate the display when using the tape-corder in the dark.

[4] VOLUME +/– buttons (19)

[5] HOLD switch (12, 14, 19, 35)
Hold function does not lock the CLOCK/SET, COUNTER/–, RESET/+ buttons (except for the low-power consumption mode).
Slide the switch to HOLD in the stop mode to enter the low-power consumption mode.

[6] REMOTE/⌒ (headphones) jack (19, 24, 31)

[7] LINE OUT (line output) jack (25, 30)

[8] REC LEVEL (recording level) control (24)

[9] MIC/LINE IN (microphone/line input) jack (15, 22, 24)

[10] Tape operation buttons: (17)
◄◄ ◄◄ (rewind/review • AMS) button
■ STOP button
► PLAY button
►► ►►I (fast-forward/cue • AMS) button
● REC (record) button
II PAUSE button

[11] DC IN 4.5V (external power input) jack (36)

[12] OPEN switch (13)

[13] RESET/+ button (9, 38)

[14] COUNTER/– button (9)

[15] CLOCK/SET button (10, 12)

Main unit —back side

[16] MIC ATT (microphone sensitivity) switch (16)

[17] MIC/LINE IN (microphone/line input) switch (16, 22)

[18] MANUAL•MIC LIMITER•AUTO (AGC) selector (16, 22)

[19] SP•LP (standard play/long play mode select) switch (16, 23, 24)

[20] REMOTE•DIGITAL I/O (input/output) jack (23, 30, 37)
Connect equipment with digital input/output using the connecting cable POC-DA12P/DA12MP/DA12SP or RK-DA10P (not supplied), the adaptor kit RM-D100K, the remote control RMT-D100, or the super bit mapping adaptor SBM-1, etc.

[21] Battery compartment lid (11)

[22] AVLS (automatic volume limiter system) switch (31)

Headphones with Remote Control

[1] Stereo mini plug

[2] COUNTER MODE button (9)

[3] VOL +/– (volume) button (19)

[4] CLOCK button (10)

[5] AVLS button (31)

[6] HOLD switch (12, 14, 19, 35)
When you slide it to the direction of the arrow, the buttons on the remote control will be locked. But the COUNTER MODE, CLOCK and the AVLS buttons will operate.

[7] TAPE operating buttons (17)

▶▶I (Fast forward/cue•AMS) button

▶ (play) button

■ (stop) button

I◀◀ (Rewind/review•AMS) button

[8] Display

[9] Remote plug

Display
Main unit

1 LP (Long Play) mode indicator (16, 25)

2 PGM.NO (program number)•day •AM/PM indicator (12, 20)

3 Tape counter/clock/volume/ message indicator (9, 10, 39)

4 START ID (automatic Start ID•renumber•erase signal) indicator (26)

5 START ID indicator (26)

6 Peak level indicator (24)

7 BATT (remaining battery power status) indicator (34)

8 MIC LIMITER indicator

9 AGC indicator

10 REC (recording) indicator

11 II (pause) indicator

12 ► (playback) indicator

Remote control
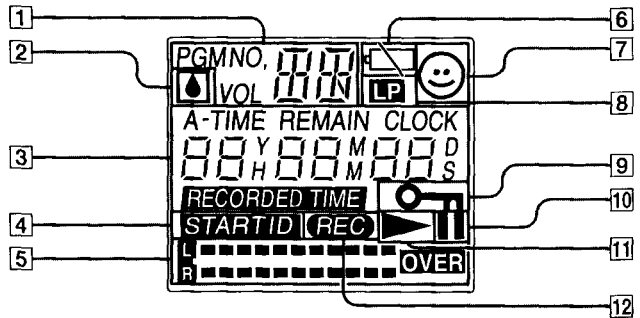
1 PGM.NO (program number)•day•AM/PM•volume indicator

2 Moisture condensation indicator

3 Tape counter/clock indicator

4 START ID indicator

5 Peak level indicator

6 ⊏⊐ (battery power status) indicator

7 AVLS indicator

8 LP (Long Play) mode indicator

9 HOLD indicator

10 II (pause) indicator

11 ► (playback) indicator

12 REC (recording) indicator

Using the display
Main unit

Remote control

Day/AM/PM indicator

Day/AM/PM indicator

Tape counter/clock indicator

Tape counter/clock indicator
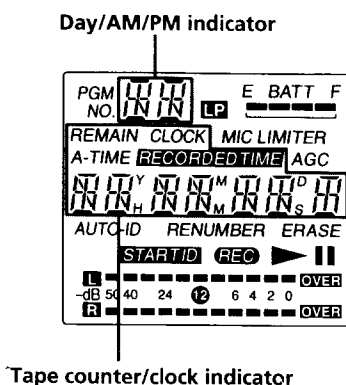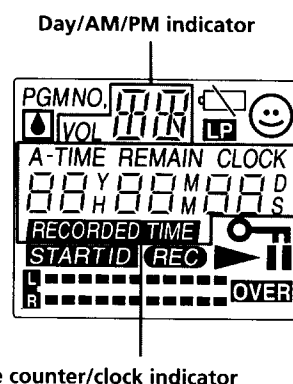
Note

The tape counter is provided as a visual guideline and is not a clock. The value displayed in the counter is not an accurate depiction of the actual time. Therefore, do not use the tape counter as a clock.

Tape counter display

Each time the COUNTER button is pressed (on the remote control, the COUNTER MODE button), the display changes as follows:

Example: indication on the main unit

$0_H 0 7_M 0 9_S$ Tape counter (normal display)

A-TIME
$0_H 0 8_M 0 2_S$ Absolute time (absolute time from the beginning of the tape)

REMAIN
$1_H 0 0_M 0 0_S$ Remaining time of the tape
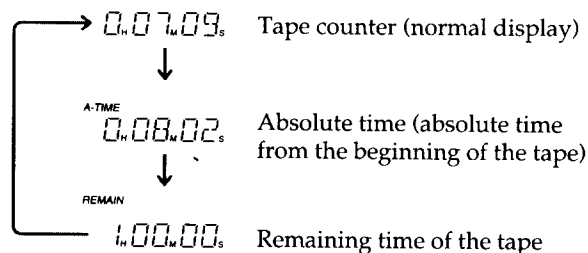
To reset the tape counter (normal display) to "0H00M00S"

Press the RESET button on the main unit when the tape counter is displayed.

Remaining time of the tape

The remaining time of the tape appears normally after about 16 seconds of commencing playback in the SP mode. However, there may be a deviation in the amount of time displayed depending on the tape.

* The RECORDED TIME is displayed while playing back only.

Note

When the tape-corder enters the recording, recording monitor, or pause mode while RECORDED TIME is indicated, the tape-corder displays the current time.

Message display

Refer to page 39 for "Message Display".

Clock display

Each time the CLOCK/SET button is pressed (on the remote control, the CLOCK button), the display changes as follows:

```
      T U
   95ʸ 8ᴹ 1ᴰ
```
RECORDED TIME*
(date of the recording)

↓

```
      A M
   10.08.23ₛ
```
RECORDED TIME*
(time of the recording)

↓

```
      T U
      CLOCK
   97ʸ 4ᴹ 1ᴰ
```
Current date
(year, month, date)

↓

```
      A M
      CLOCK
   12.00.00ₛ
```
Current time
(hour, minute, second)
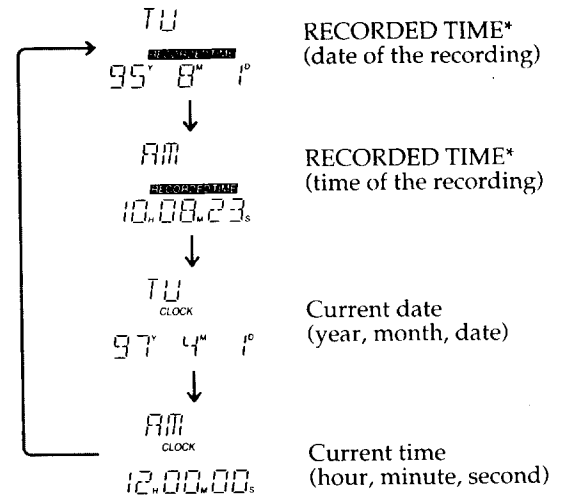
Inserting the Batteries

Use two LR6 (size AA) alkaline batteries.
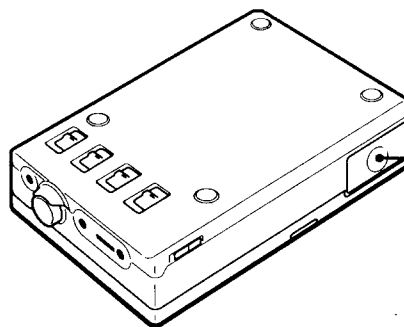
Battery compartment lid

You may also use the rechargeable battery or the house current. For more details see "Power Sources", page 32.
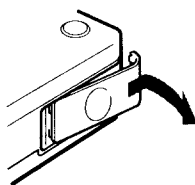
1		Open the battery compartment lid.
2		Insert two new alkaline batteries (not supplied) into the battery holder. Make sure to insert them with correct polarity.
3		Close the compartment lid.
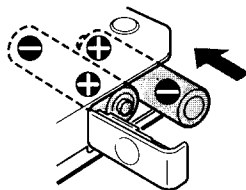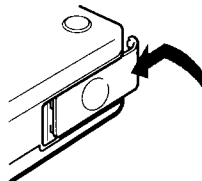
Setting the Clock

Set the clock before starting any recording operations to stamp the date and time. Otherwise, you cannot get the correct date and time.

The clock will return to its default setting (TU/97Y4M1D/AM12H00M00S) if the batteries are removed from the unit for a long time. In this case, set the clock again.
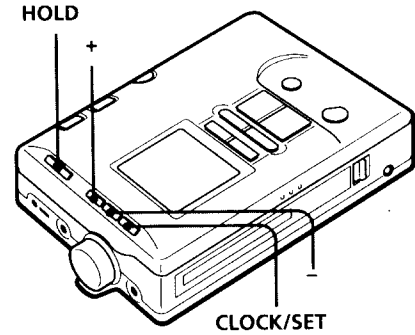
HOLD

CLOCK/SET

Make sure that the tape-corder is in the stop mode and that the HOLD function is off.
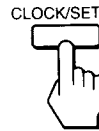
1 CLOCK/SET · Press the CLOCK/SET button for more than four seconds.
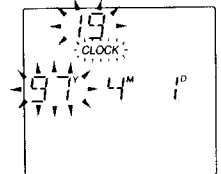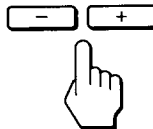
2 ☐ – ☐ ☐ + ☐ Press + or – button to set the current year, then press the CLOCK/SET button.
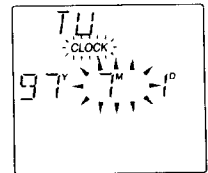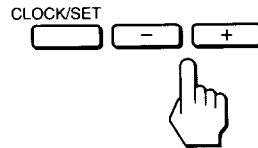
3 CLOCK/SET ☐ ☐ – ☐ ☐ + ☐ Repeat step 2 to set the current month, date, hour, minute. For seconds, pressing + or – will set it to "00". Then press the CLOCK/SET button.

The display stops flashing and the clock operates.
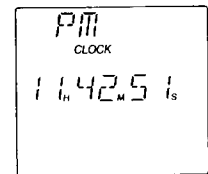
Tip
To set the clock accurately, set the second to 00 with the + or – button, and then press the CLOCK/SET button at the time of the tone.

To select either the 12-hour or 24-hour clock display
Press the + button for 2 seconds or more.

To quit the clock setting
Press the ■ STOP button. The clock display will return to the previous clock setting. However, if the date is set , the year, month and date will be set and will not be applicable for further cancellation.

Inserting the Cassette

Cassette
compartment lid
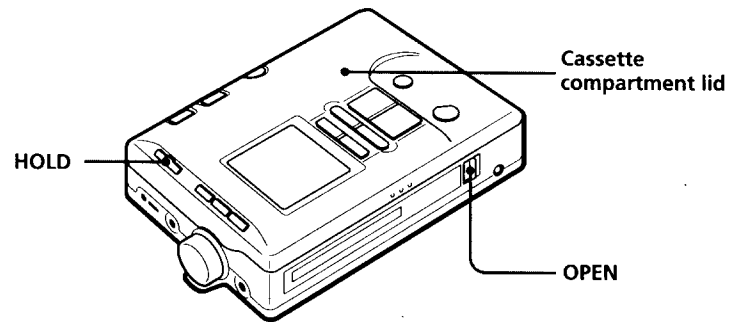
HOLD

OPEN

Make sure that the HOLD function is off.

1
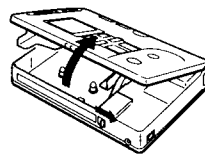
Open the cassette compartment
lid.
① Slide the OPEN switch.

② Open the cassette
   compartment lid when it
   opens slightly.

2
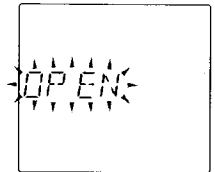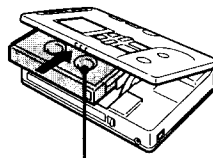
Insert the cassette.

Insert the cassette with the
window facing up. If the cassette
is inserted upside down, it may
not be removed from the unit.

Window facing up.
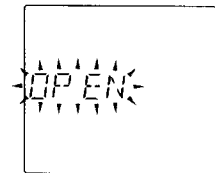
3
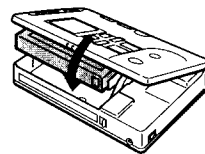
Close the lid.

The cassette is loaded
automatically.
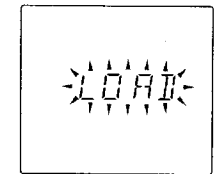
Notes

- The cassette holder will not open if HOLD is locked. Release HOLD to insert a cassette.
- When inserting or taking out a cassette, do not hold the cassette as shown below. This may lead to a malfunction.
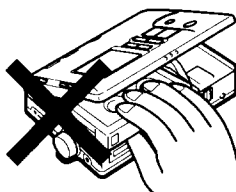
- Make sure that the cassette compartment lid is closed and "UNLOAD" or "LOAD" is not displayed before disconnecting the power source. Otherwise, the cassette compartment lid may not close. In this case, connect the power source again.

Tip

While the tape-corder is in the stop mode, slide the HOLD switch on the main unit to HOLD to enter the low-power consumption mode manually when using the unit on batteries. (See page 34.)

* You can set the display, clock or AVLS.

To eject the cassette

While the tape-corder is in the stop mode, slide the OPEN switch.
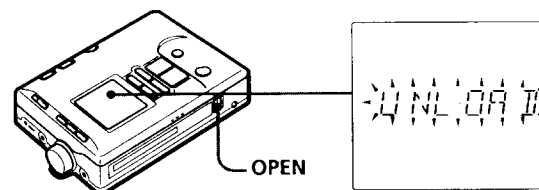
To protect your recording

Slide open the record-protect shutter to record-protect your tape.
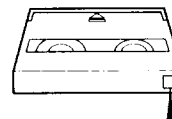
	If the shutter is open, you cannot record on the tape.
	If the shutter is closed, you can record on the tape.

Notes on DAT cassettes

- Unlike conventional analog cassettes, playback and recording are applicable on one side of the cassette only.
- Under normal usage, the construction of the DAT cassette prevents undesirable entry of dust and foreign particles. Do not open the DAT cassette unnecessarily.
- Do not insert items into the holes on the reverse side of the DAT cassette.

To prevent accidental operations — HOLD function

Main unit: Slide the HOLD switch until the yellow hold mark shows. When a button is pressed in the HOLD mode, "HOLD" will flash for 3 seconds in the display and the buttons will be locked*.

Remote control: Slide HOLD switch in the direction of the arrow. "○━" will light up in the display and the buttons will be locked.

Recording

Microphone
(not supplied)

II PAUSE

● REC

MIC ATT
MIC/LINE IN
MANUAL•MIC LIMITER•AUTO
(AGC)

► PLAY

to MIC/LINE IN

SP•LP
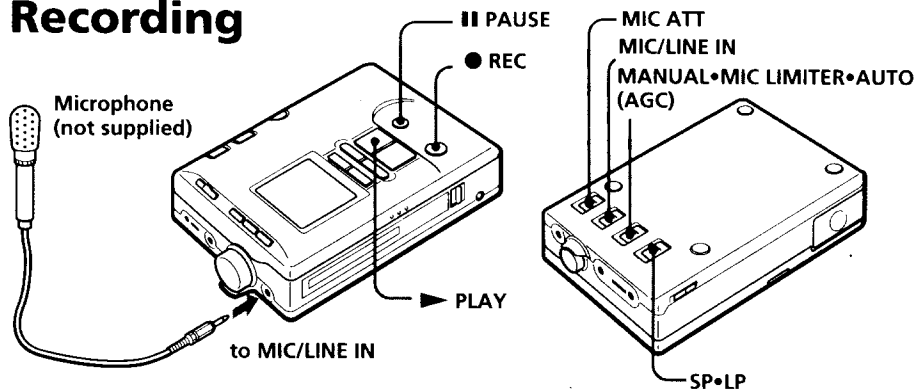
Refer to page 22 for "Connecting with Other Equipment for Recording".

Note

The absolute time may not be written correctly in the following cases.

- When recording on a partially recorded tape containing an unrecorded segment (i.e., a portion of the tape that has never been recorded).
- When recording on a partially recorded tape for which the absolute time has not been written originally.

Note

Do not press the ■ STOP button when "bL RNH" is displayed. If it is pressed, the absolute time will become "--H--M--S" and will not be written thereafter.

Locating the point at which to begin recording

The absolute time is automatically written simultaneously while recording.

The absolute time is indicated as the length of time from the beginning of the tape, and is useful in determining the elapsed time from the beginning of the tape. If you wish to continue to record on a partially recorded tape, make sure that you initially locate the end of the previous recording prior to resuming recording from that point to avoid leaving any unrecorded segment unnecessarily. Once the absolute time is written, it cannot be erased.

If you wish to insert a four-second blank segment automatically, refer to page 25 for "Recording blank segment—REC MUTE".

To record from the beginning of the tape

Press the I◄◄ ◄◄ button to rewind the tape. "TOP" flashes when the tape is rewound to the beginning.

To record on a partially recorded tape

Press the ►► ►►I button to locate the end of the previous recording. "bL RNH" appears when the end of the previous recording is located, and the tape stops at the point.

When "— —" flashes for the program number

"— —" indicates an unrecorded segment. Press the ◄◄ ◄◄ button to rewind the tape until "— —" stops flashing. Then, press the ►► ►►⊦ button to locate the end of the previous recording.
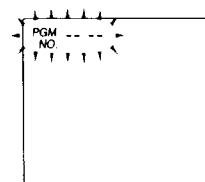
Recording from a microphone

1		Insert a cassette and locate the point at which to begin recording.
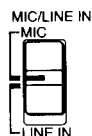
2	MIC/LINE IN	Set the MIC/LINE IN switch to MIC.
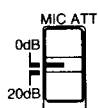
3	MIC ATT	Set the MIC ATT switch. 0 dB: Normal 20 dB: For loud sound
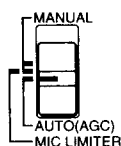
4	MANUAL AUTO(AGC) MIC LIMITER	Set the MANUAL•MIC LIMITER•AUTO (AGC) selector to AUTO (AGC). The tape-corder adjusts the recording level automatically. To adjust the recording level manually, set the selector to MANUAL or MIC LIMITER. (See page 24.)
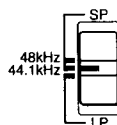
5	SP 48kHz 44.1kHz LP	Select the sampling frequency. Set the SP•LP switch to SP (Standard Play mode 48 kHz or 44.1 kHz). To record in the Long Play mode, set the switch to LP. (See page 25.)

| Recording
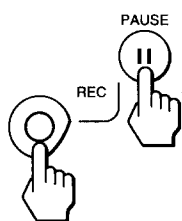
6 PAUSE REC Press the ● REC and **II** PAUSE buttons.

The tape-corder enters the pause mode. If only the ● REC button is pressed, the tape-corder enters the recording monitor mode (see page 25) and does not begin recording.
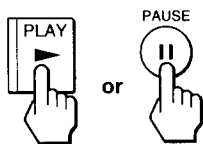
7 PLAY PAUSE **or** Press either the ► PLAY or **II** PAUSE button.

The recording begins.

Tips
- To begin recording immediately, press the ► PLAY button while pressing the ● REC button in the stop or playback mode.
- The sampling frequency is displayed when the sampling frequency is changed during recording and recording pause.
- If the tape-corder remains in the pause mode for five minutes or longer, the tape-corder will enter the stop mode automatically in order to protect the head and tape.
- If the tape-corder remains in the stop mode for three minutes or longer while using the unit on batteries, the tape-corder will enter the low-power consumption mode automatically (see page 35) to protect the tape and to conserve the battery.

Other operations

To	Press
Stop recording	■ STOP
Pause recording	II PAUSE
Release pause	II PAUSE or ► PLAY
Check the input source: in the recording mode in the recording monitor mode in the recording pause mode	● REC Press the button until the input source display appears.
Check the sampling frequency	► PLAY in the recording mode until the sampling frequency is displayed.
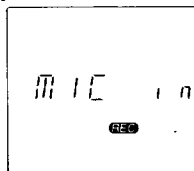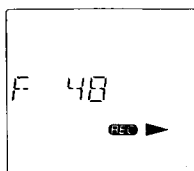
Tip

- When the tape-corder records to the end of the tape, it rewinds the tape automatically to the beginning and stops. (Auto-rewind function).

Notes

- The unit will not enter the low-power consumption mode during the recording monitor mode, even when using the unit on batteries.
- Changing the sampling frequency while recording may cause temporary sound dropout to be recorded.
- Noise may be recorded if you set the MIC/LINE IN switch during recording.
- Noise may be recorded when the display light is turned on while recording. In this case, turn it off.
- If **OVER** appears when the recording mode is set to AUTO (AGC), set the MIC ATT to 20dB or move the microphone away from the sound source.

To record relatively low sounds

Lower the recording level (in the manual recording mode) and move the microphone as close as possible to the sound source and then adjust the recording level. Clear and optimum recording with minimal noise interferences will be achieved.

Choosing microphones for better recording

The recording is affected by and is dependent upon the type of microphones used. For better recording, use the optional ECM-MS957 or ECM-MS907 microphone.

Compatible microphones

- Optional plug-in power type microphones are compatible for this tape-corder.

- Optional auto power supply type microphones are not compatible for this tape-corder.
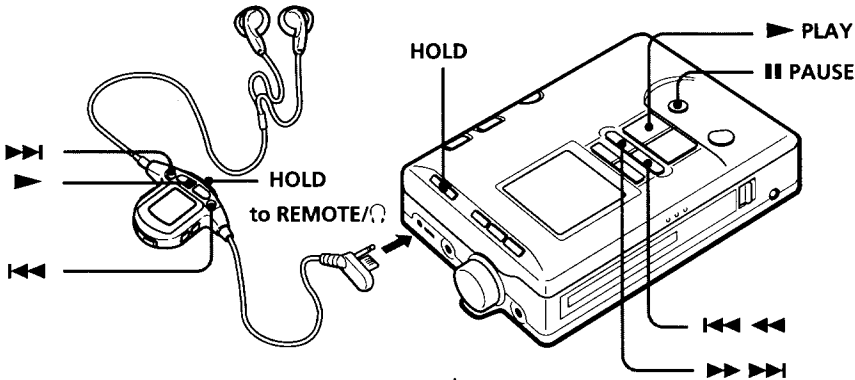
Playing Back

1	Insert a cassette and connect the headphones with remote control.
	Release the Hold function.

2	Press the ► PLAY button.	PGM ☐ ☐
	The playback begins.	$0_H.00_M.03_S$
		►
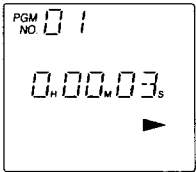
Tips
- The SP (Standard Play) mode and LP (Long Play) mode will be detected automatically for playback.
- When the tape-corder plays back to the end of the tape, it rewinds the tape automatically to the beginning and stops (Auto-rewind function).
- The pause playback cannot be operated with the remote control.

Other operations

To	Press
Adjust the volume	VOLUME +/- (VOL +/-)
Stop playback	■ STOP (■)
Pause playback	II PAUSE
Release pause	II PAUSE or ► PLAY (►)
Fast forward	►► ►►I (►►I) in the stop mode
Rewind	I◄◄ ◄◄ (I◄◄) in the stop mode

( ) is indicated for the remote control.

Tips
- If the tape-corder remains in the pause mode for five minutes or longer, the tape-corder will automatically enter the stop mode in order to protect the head and tape.
- If the tape-corder remains in the stop mode for three minutes or longer while using the unit on batteries, the tape-corder will enter the low-power consumption mode automatically (see page 35) to protect the tape and to conserve the battery.

Notes
- When you set the recording level too high, the sound may become distorted. If this happens, turn down the recording level.
- The AMS function will not operate if the Start IDs are not written. (See page 26.)
- The AMS function may not operate properly with a DAT cassette recorded on other DAT decks.

* Automatic Music Sensor

To fast-forward/rewind while monitoring the sound

You can fast-forward (cue) or rewind (review) while monitoring the sound.

Cue	Press and hold ▶▶ ▶▶I (▶▶I) in the playback mode. When the button is released, normal playback resumes.
Review	Press and hold I◀◀ ◀◀ (I◀◀) in the playback mode. When the button is released, normal playback resumes.

( ) is indicated for the remote control.

To high speed cue/review

This function can be operated only from the main unit.

| High speed cue	Press ▶ PLAY and ▶▶ ▶▶I during playback.
High speed review	Press ▶ PLAY and I◀◀ ◀◀ during playback.

To locate the beginning of a track—AMS* function

You can locate the beginning of a track in the playback, fast-forward/rewind, and stop modes.
Playback mode: Press ▶▶ ▶▶I (▶▶I) or I◀◀ ◀◀ (I◀◀) quickly.
Fast-forward/rewind mode: Press ▶▶ ▶▶I (▶▶I) or I◀◀ ◀◀ (I◀◀) once.
Stop mode: Press ▶▶ ▶▶I (▶▶I) or I◀◀ ◀◀ (I◀◀) twice.

To locate the beginning of the next/succeeding program (track) E.g.: When locating the beginning of the fifth succeeding program (track)	Press ▶▶ ▶▶I (▶▶I) once/ repeatedly
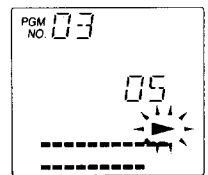
To locate the beginning of the current/previous program (track) E.g.: When locating the beginning of the fourth previous track including the current program (track)	Press I◀◀ ◀◀ (I◀◀) once/ repeatedly
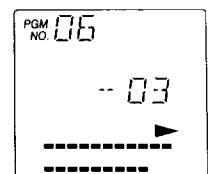
( ) is indicated for the remote control.

To check the sampling frequency

You can check the sampling frequency of the recorded sound.

Press ► PLAY in the playback mode until the sampling frequency is displayed.

```
F  48
```
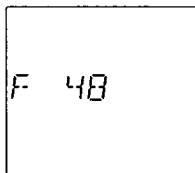
Display during fast-forward/rewind (AMS function)

Peak level indicator (L) shows the tape transport direction. Peak level indicator (R) shows the remaining amount of tape.

Tape transport direction
to the right: fast-forward
to the left: rewind

Remaining amount
of tape
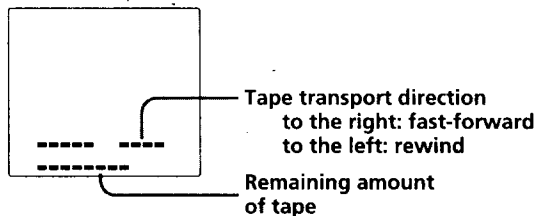
To play back the tape from the beginning automatically—Auto-play function

This function can be operated only from the main unit.
Press the ► PLAY button while pressing the I◄◄ ◄◄ button. Playback begins automatically when the tape is rewound to the beginning.

Likewise, playback begins automatically when the tape is rewound to the beginning of the previous program (track) in the AMS function.

Connecting with Other Equipment for Recording

You can connect the tape-corder to other analog audio equipment or audio equipment with digital output. Refer to page 15 for "Recording".

Recording from analog audio equipment with a LINE OUT jack (Analog connection)

TCD-D100   Audio connecting cable
                  RK-G129
                  (not supplied)   ┌─────────────┐
                                     │ Stereo unit │
                                     │ or radio   │
                                     │ cassette-   │
                                     │ corder, etc.│
to LINE IN   to LINE OUT   └─────────────┘
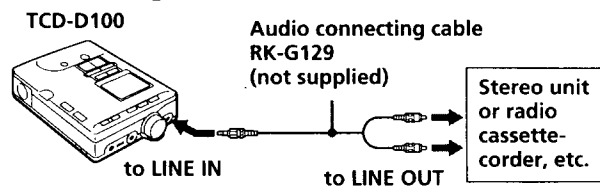
1 Set the MIC/LINE IN switch to LINE IN.

2 Select the recording mode using the MANUAL•MIC LIMITER•AUTO (AGC) selector.

MANUAL: adjust recording level manually (see page 24)

AUTO (AGC):recording level will be adjusted automatically (see page 16)

3 Select sampling frequency using the SP•LP switch.

SP (48kHz, 44.1kHz): normal recording mode.

LP: long continuous recording mode. Sampling will be done by 32kHz. (see page 25)

4 Press the ● REC and II PAUSE buttons.

5 Press either the ▶ PLAY or II PAUSE button to begin recording. Then, begin playback of the connected source.

Notes

- If "*COPY PROHIBIT*" is displayed, the source cannot be recorded. (See page 38)
- Use only the recommended digital cable (not supplied). (see page 47) You cannot use the POC-DA12/DA12M/DA12S digital connecting cables or RK-DA10 coaxial cable with this unit.
- Make sure to set the INPUT SELECT switch of the connecting cable to DIGITAL before recording. Switching the digital/analog switch during recording will cause a short mute in the recording.

Tips

In digital connection, note the following:
- Setting the recording mode is not required.
- The recording level is set automatically to the level of the source. Manual adjustment is not available in this case.
- Setting of the SP•LP switch is applicable when recording a 32 kHz source only. (When set to SP, the source is recorded in the 32 kHz SP mode. When set to LP, the source is recorded in the 32 kHz LP mode.)
  Other sources will be automatically recorded in its own sampling frequency regardless of the SP•LP switch. In this case, you cannot record in the LP mode.

Recording from audio equipment with digital output (Digital connection)
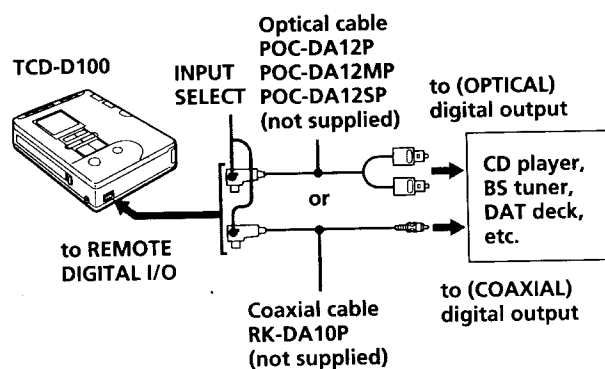
1 Use and connect the optical cable or coaxial cable according to the digital output jack of the connected equipment.

2 Set the INPUT SELECT switch of the connecting cable to DIGITAL.

3 Press the ● REC and **II** PAUSE buttons.

4 Press either the ▶ PLAY or **II** PAUSE button to begin recording. Then, begin playback of the connected source.

Source and sampling frequency for recording

When recording with digital connection, the sources will be automatically recorded in its own sampling frequency shown below.

Source	Sampling frequency
Broadcasting satellite B mode audio DAT SP mode	48 kHz
CD MD DAT SP mode	44.1 kHz
Broadcasting satellite A mode audio DAT LP mode	32 kHz

Useful Recording Functions

▶ PLAY

II PAUSE

● REC

to MIC/LINE IN

DAT deck, tuner, etc.

to REMOTE/○

MANUAL•MIC LIMITER•AUTO (AGC)

SP•LP

Headphones, active speakers, etc.
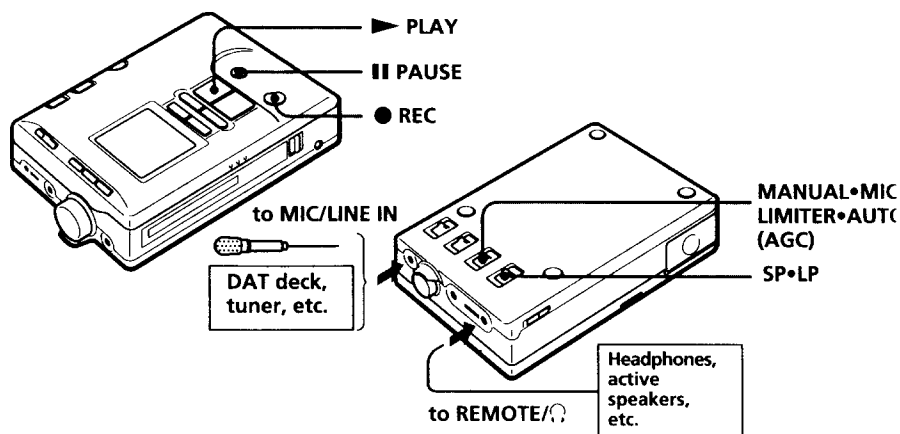
What's the MIC LIMITER?

The MIC LIMITER automatically holds down sudden large input signals. Setting the recording mode to MIC LIMITER and setting the recording level slightly higher than the usual level will give good results when recording at parties or conferences.

Notes

• Manual adjustment of the recording level is unavailable when recording via digital connection.

• Recording level is set excessively high when **OVER** appears in the right side of the peak level indicator. Turn down the recording level.

If distortion still occurs when **OVER** is not displayed, set the MIC ATT switch to20dB or move the microphone away from the sound source.

Adjusting the recording level manually—Manual recording

For optimum recording with microphones or from analog audio equipment, adjust the recording level manually.

1 Set the MANUAL•MIC LIMITER•AUTO (AGC) switch to MANUAL or MIC LIMITER.
MANUAL: to record via analog connection or microphones.
MIC LIMITER: to record via microphones.

2 Press the ● REC button to enter the recording monitor mode.

3 Begin playback of the source and turn the REC LEVEL control to adjust the recording level while monitoring the sound.

Turn the REC LEVEL control so that the peak level indicators are maintained around level **12**. Make sure that **OVER** does not appear when there is a loud sound input.

Peak level indicator

4 Press the ▶ PLAY button while pressing the ● REC button to begin recording.

| Recording
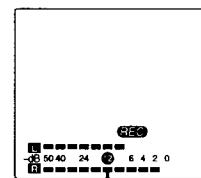
Notes

- A tape recorded in the LP mode cannot be played back on a DAT deck which is not equipped with the LP mode function.
- A loud noise may be heard during the transition from the SP mode to the LP mode when a tape containing a recording that has been switched from the SP mode to the LP mode halfway is played back on a DAT deck which is not equipped with the LP mode function. In this case, turn down the volume or stop playback.

Tip

To insert a blank segment of 4 seconds or more, press the **II** PAUSE button while pressing the ● REC button, and then hold down only the **II** PAUSE button for 4 seconds or longer. When the blank segment exceeds four seconds, "**II**" indicator will flash quikly. The tape-corder re-enters the pause mode when the **II** PAUSE button is released.

Recording in the Long Play mode—LP REC

Set the SP●LP switch to LP to record twice the recording time of conventional DAT cassettes. Accordingly, a 60-minute DAT cassette recorded in the LP mode enables recording of 120 minutes.

Tape counter display during LP mode

The absolute time and the remaining time of the tape are based on the SP mode. Therefore, the actual time is twice the amount of the value shown on the display.
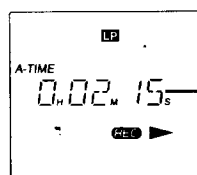
The actual time during LP mode is 4 and half minutes.

Recording blank segments—REC MUTE

A blank segment can be inserted at the beginning of the track and between tracks. In this case, the Start ID is not written.

1 Press the ● REC button and the **II** PAUSE button to enter the recording pause mode.

2 Press the **II** PAUSE button while pressing the ● REC button.

   A four-second blank segment is inserted and the unit returns to the recording pause mode automatically.

Monitoring the recording

Use the headphones or speakers of the stereo unit to monitor the sound while recording.

1 Plug the headphones to the REMOTE/⌒ jack or the stereo unit to the LINE OUT jack of the tape-corder.

2 Begin recording.

Writing Start IDs

A Start ID is a signal which indicates the beginning of a program (track). The tape-corder searches the Start IDs to locate the beginning of a program (track) with the AMS (Automatic Music Sensor) function.

START ID•ENTER

START ID•MODE

→ Tape transport direction

track track

Tape
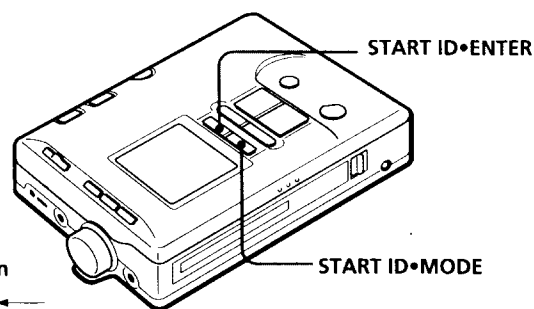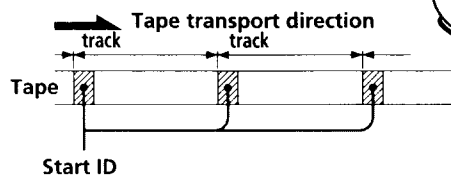
Start ID

Tips
- To write the Start ID manually during recording, press the START ID•ENTER button. The Start ID is written at the point where the START ID•ENTER button is pressed regardless of whether "AUTO-ID" is displayed or not.
- You can only switch AUTO-ID on or off when START ID•MODE is pressed during recording, recording monitor or recording pause modes.

Note
- The buttons except the ■ STOP button do not work while **START-ID** is flashing.

Writing Start IDs during recording

When AUTO-ID is turned on, the Start IDs will be written during recording on the basis of the output level of the source. When AUTO-ID is turned off, the Start IDs will be written during recording on the basis of the existing ID information of the source.

1 Press the START ID•MODE button on the main unit repeatedly until "AUTO-ID" appears (to turn on AUTO-ID) or disappears (to turn off AUTO-ID).
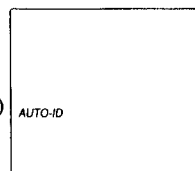
AUTO-ID

2 Begin the recording. When the Start ID is written, "*WRITE*" appears for a moment, and then **START-ID** flashes for about 9 seconds (about 18 seconds in the LP mode).

WRITE
START-ID

Notes

- When AUTO-ID is turned on, the Start ID may not be written properly if there is noise in the sound source.
- When writing Start IDs continuously, make sure that there is an interval of 9 seconds or longer (18 seconds or longer in the LP mode) between the start IDs. Otherwise, the tape-corder may not locate the beginning of a track correctly.
- When AUTO-ID is turned off during digital connection, the existing program (track) information of the CD may not be written properly as the Start ID depending on the CD player in use.
- The existing program (track) information of an MD is not written as the Start ID.

Notes

- Start IDs which were written during recording or written after the selected point cannot be moved. To move the Start IDs, rewrite it after erasing.
- Start IDs cannot be written while **START-ID** is flashing rapidly during the Rehearsal function.

To write Start ID when AUTO-ID is turned on

Source	A Start ID is written when
All	• Recording begins or the recording pause is released. (During a soundless segment, Start ID is written at the point where sound is emitted.) • A sound is input after a soundless segment or a segment with a very low recording level of 3 seconds or longer. • The START ID•ENTER button is pressed during recording.

To write Start ID when AUTO-ID is turned off

Source	A Start ID is written when
All	• Recording begins or the recording pause is released. (Start ID is written regardless of whether the segment contains a sound or not.) • The START ID•ENTER button is pressed during recording.
CD player (digital input)	Identical to the existing track information of the CD. (In addition to the above.)
DAT player (digital input)	Identical to the existing track information of the DAT tape. (In addition to the above.)

Writing Start IDs during playback

You can write a Start ID anywhere you want without erasing the contents of the existing recording.

1 Press the START ID•MODE button on the main unit repeatedly until "AUTO ID" appears (to turn on AUTO-ID) or disappears (to turn off AUTO-ID).

2 Press the START ID•ENTER button during playback where you want to rewrite.

"_REHRSAL_" flashes when you select the point for Start ID. The tape-corder plays back the segment of the tape up to 3 seconds from the point and repeats it 16 times (Rehearsal function).

3 Press the START ID•ENTER button during Rehearsal function. " *ωR I T E* " will appear for a moment. " START•ID " will flash and the Start ID will be written. During this step the sound will be muted.

To adjust the selected point
Each time you press the ◄◄ ◄◄ or ►► ►►◄ button, the selected point shifts backwards or forwards in 0.3-second increments, up to a maximum extent of about 10 seconds in either direction.

Note
If a Start ID is erased, the program number which is written on the same point will be erased also.
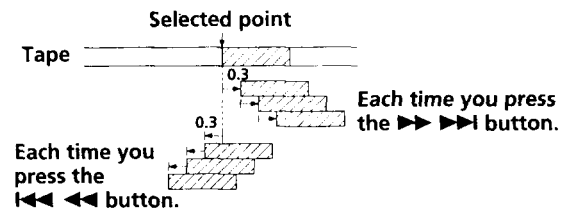
Erasing Start IDs

You can erase the Start IDs without erasing the contents of the existing recording.

Erasing the Start ID is possible only when the tapecorder is in the stop or playback mode.

1 Press the ►► ►►◄ or ◄◄ ◄◄ button to locate the Start ID you want to erase.

2 Press the START ID•MODE button repeatedly until "ERASE" appears in the display of the main unit.

3 Press the START ID•ENTER button.
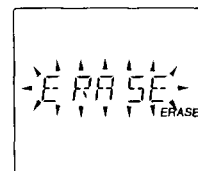
The tape will automatically rewind to find the Start ID of that program (track) and then " START•ID " will flash in the display and start to erase the Start ID. During this step the sound will be muted. Playback will start when this mode is done.

Assigning Program Numbers

A program number is a signal which indicates the number of the program (track).

The program number is written at the same time as the Start ID.

▶▶ ▶▶|
|◀◀ ◀◀
START ID•MODE
START ID•ENTER

Recording

Note

Writing and renumbering of the program number may not be completed successfully to a tape that has been recorded on other DAT decks and has a Start ID at the beginning.

Tip

Renumbering is necessary for the following tapes:
- On which the Start ID was written during playback.
- Which has missing program numbers or duplicated program numbers because the tape is recorded from the halfway of it.
- Which has a missing program number because the program number was erased at the same time a Start ID was erased on the tape.

When recording from the beginning of the tape

The program number is written automatically from number 1 in sequential order at the same time as the Start ID.

When recording from the halfway of the tape

Press the ▶▶ ▶▶| or |◀◀ ◀◀ button to display the program number before you begin recording.
The program number is written in sequential order from the following program at the same time the Start ID is written.

Renumbering the program number

1 Press the START ID•MODE button repeatedly until "RENUMBER" appears in the display of the main unit.

2 Press the START ID•ENTER button when the tape-corder is in the stop or playback mode.
The tape will automatically rewind to the beginning of the program number that was written with the Start ID and then starts to renumber the program (tracks).

" START-ID " flashes while the program number is renumbered and " R E N U m " and the tape counter appears while the tape is fast forwarding to the next Start ID program (track).
When the renumbering operation is completed, the tape-corder rewinds the tape to the beginning and stops.

Connecting with Other Equipment for Playback

You can connect the tape-corder to other analog audio equipment and audio equipment with digital output. Refer to page 19 for "Playing Back".

Tip
The output level of the LINE OUT jack and the REMOTE•DIGITAL I/O jack is fixed. The volume cannot be adjusted with the VOLUME buttons of this tape-corder.

Note
Use only the recommended optical cable (not supplied) (page 47).
You cannot use the POC-DA12/DA12M/ DA12S digital connecting cables or RK-DA10 coaxial cable with this unit.

Playback with an analog audio equipment (Analog connection)

TDC-D100   Audio connecting cable
                RK-G129 (not supplied)

Stereo unit or radio cassette recorder, etc.

to LINE OUT   to LINE IN
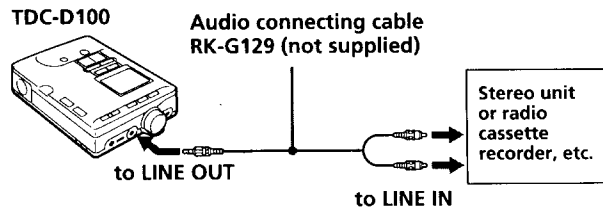
Begin playback and adjust the volume of the connected equipment.

Playback with an audio equipment with digital input (Digital connection)

TDC-D100   Optical cable
                POC-DA12P
                POC-DA12MP
                POC-DA12SP
                (not supplied)

DAT deck, digital amplifier, etc.

to REMOTE DIGITAL I/O
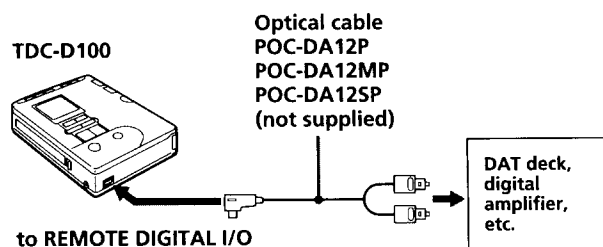
Connect the digital audio equipment to this tape-corder as shown. Begin playback and adjust the volume of the connected equipment.

Useful Playback Functions

The AVLS* function is operational when using the headphones during playback or in the recording monitor mode.
The AVLS function keeps down the maximum volume to protect your ears.

---
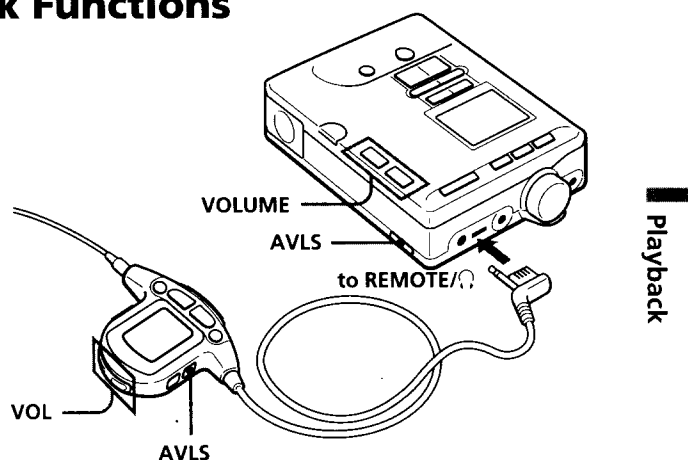
* Auto Volume Limiter System

Note

You may operate the AVLS function on both the main unit or the remote control. You can cancel AVLS by pressing AVLS on the remote control even if the AVLS switch on the main unit is set to LIMIT. "☺" will disappear from the remote display and AVLS will be cancelled.

Using the AVLS function

Operational either from the main unit or the remote control.

Main unit: Set the AVLS switch to LIMIT.

Remote control: Press AVLS on the remote control.
"☺" will be displayed in the window of the remote control.

AVLS switch	Volume and display
LIMIT (☺)	The maximum volume is restricted to a designated level. "*R VL 5*" appears followed by "*VOL*" when the VOLUME button is pressed. When the volume is turned to the maximum level, "*R VL 5*" flashes.
NORM (none)	The volume control is set to normal. Each time you press the VOLUME buttons, the volume level changes accordingly and "*VOL*" appears. When the volume is turned to the maximum level, "*MAX*" appears.

( ) is indicated for the remote control.

Using the unit on Nickel Metal Hydride Rechargeable Batteries

You can use the Nickel Metal Hydride rechargeagble batteries NH-D100. Before using the nickel metal hydride rechargeagble batteries, be sure to charge it.
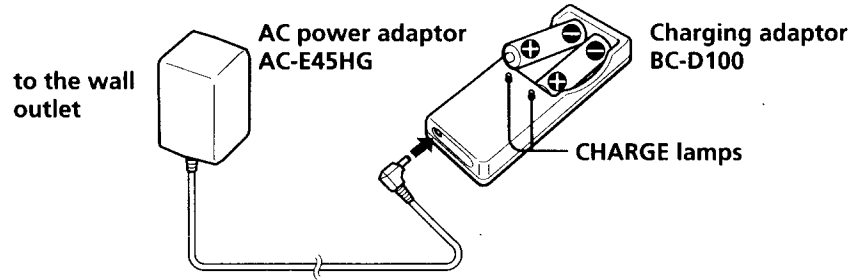
Tips
- The charging adaptor can charge either one battery or two batteries at a time.
- During the charging, the rechargeable batteries and the AC power adaptor may emit some heat, but this is not a malfunction.

Notes
- Use only the recommended rechargeable battery, charging adaptor and AC power adaptor for charging. If you use other types of charging equipment, this may lead to a malfunction.
- When the CHARGE lamp flashes a red light, remove the rechargeable battery and check the polarity and the conditon of the batteries. If there is no problem with the battery, try to charge them again. You cannot charge a dry battery or a fully-charged rechargeable battery.

1 Connect the charging adaptor BC-D100 to the AC power adaptor AC-E45HG and then connect the AC power adaptor to a wall outlet.

2 Insert the nickel metal hydride rechargeable batteries NH-D100 into the charging compartment.

The CHARGE lamp will light red during charging. After the charging has been completed, the CHARGE lamp will light green. Charging will take about 2.5 hours. (The charging time may vary depending on the temperature.)

3 Insert the charged batteries into the battery compartment of the main unit.

Notes on charging
- Charge the battery just before using it.
- Charge the batteries that are completely exhausted (when "bATTERY" starts to flash in the display of the main unit).
- Charging may take longer than the average charging time if you are charging it for the first time or if you have not used the battery for a long time. The charging time will become average after you have charged it a few times.

On rechargeable batteries
- When the battery life of a fully charged battery becomes short, replace the rechargeable batteries with new ones.
- Be sure to cover the poles of the used batteries with elastic tape to insulate it and then dispose the used batteries.

Note
- Remove the rechargeable batteries as soon as possible from the charging adaptor when charging is finished. If you leave the rechargeable batteries in the charging adaptor for a long period of time it may decrease the battery capacity.

On battery placement
- Store the batteries in a cool, dry place.

Replacing the batteries
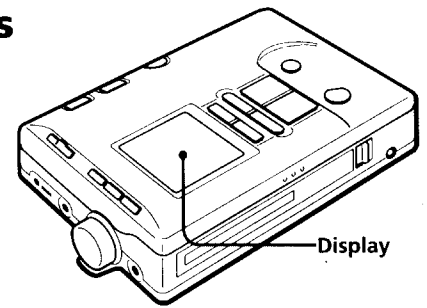
Display

Tips

- This tape-corder is not equipped with a power switch. As a result, the LCD display will always be turned on as long as the batteries are inserted. However, power consumption is minimal and negligible.
- The clock will return to its default setting (TU/97Y4M1D/AM12H00M00S) if the batteries are removed from the tape-corder for a long time. In this case, set the clock again.

Notes

- If "bRTTERY" is still displayed after replacing the batteries press any button to clear this display.
- When using the unit on batteries, do not use a dry battery and a rechargeable battery together.
- The battery life may shorten depending on the temperature and the type of the battery.
  "bRTTERY" or "⊂⊐" may not be displayed depending on the type of battery. Use the recommended NH-D100 battery.
* When no plug is connected to the LINE OUT, REMOTE/Ω or the REMOTE•DIGITAL I/O jacks and the display backlight turned off.

When to replace the batteries

The status of the remaining battery power is displayed on the main unit. On the remote display, "⊂⊐" will flash or appear when the batteries become weak.

Display on the main unit

E BATT F   Battery full.

↓
↓
↓
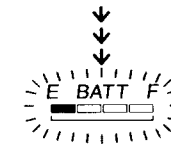
E BATT F   Replace both batteries with new ones.
"bRTTERY" flashes and the tape-corder stops when used beyond this point.

Display on the remote control

⊂⊐   The batteries are weak. Replace both batteries with new ones.

↓

⊂⊐   The batteries are completely exhausted.

Battery life   (Approx. hours)

Battery	Playback	Recording
Sony nickel metal hydride rechargeable (NH-D100)	4	3 (3.5*)
Sony alkaline LR6 (size AA)	2.5	1.5 (2.5*)

Values for battery life at 20°C and for long continuous playback or recording.
Battery capacity decreases and battery life becomes shorter in low temperatures.

Low-power Consumption Mode

If the tape-corder remains in the stop mode for 3 minutes* or longer, it will enter the low-power consumption mode automatically to conserve the battery.

HOLD

■ **STOP**

---
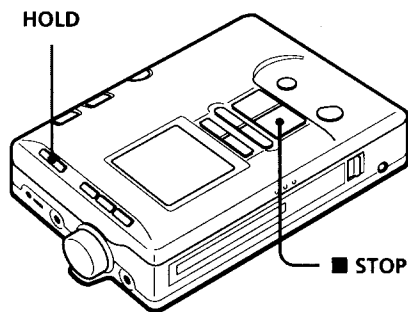
* The unit will enter the low-power consumption mode when the cassette holder is open for about 30 seconds. When the CLOCK button, etc., is pressed during a low-power consumption mode, the unit will re-enter the low-power consumption mode in about 30 seconds.

When the unit automatically switches to the low-power consumption mode

The tape unloads automatically to protect the tape and the tape-corder enters the low-power consumption mode to conserve the battery when the tape-corder is in the stop mode for 3 minutes* or longer. In the low-power consumption mode, the display changes to the clock and the backlight turns off. On the remote control the display is turned off.

To enter the low-power consumption mode manually

1 Make sure that the tape-corder is in the stop mode.

Press the ■ STOP button if the tape-corder is in the pause mode.

2 Slide the HOLD switch on the main unit to show the yellow hold mark.

The tape-corder enters the low-power consumption mode.

When you press a button "HOLD" will flash for a few seconds in the display.

Operating with the AC Power Adaptor or Car Battery

AC power adaptor AC-E45HG
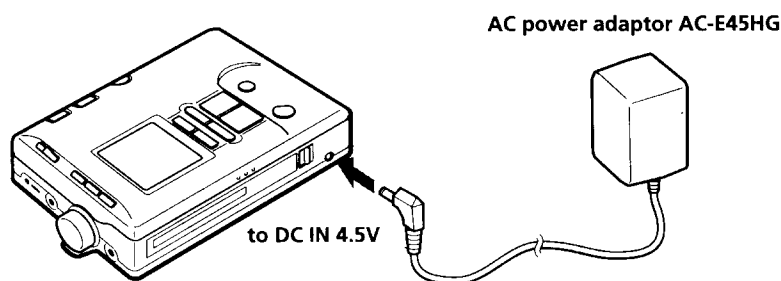
to DC IN 4.5V

Tips
- When the AC power adaptor or the car battery cord is connected to the DC IN 4.5V jack of the tape-corder, the internal batteries are automatically disconnected. Power is automatically supplied from the external power source.
- When the AC power plug or the car battery cord is used for an extended period of time, the internal temperature of the tape-corder may rise. This is not a malfunction.
- If the unit is in the stop mode for more than 10 minutes while using the house current or a car battery. The set functions will be canceled and the tape will be unloaded for tape protection.

Using the AC power adaptor

Connect the AC power adaptor AC-E45HG to the DC IN 4.5V jack.

Notes on the AC power adaptor

- Use only the AC-E45HG AC power adaptor. Do not use any other AC power adaptor.

Polarity of the plug

- Make sure that the cassette compartment lid is closed before disconnecting the AC power adaptor or removing the batteries. The cassette compartment lid may not close if the power source is disconnected or removed while the cassette compartment lid is open. In this case, connect the power adaptor or insert the batteries again.

Using the car battery

To operate the tape-corder with the car battery, connect the car battery cord Sony DCC-E245 (not supplied) to the DC IN 4.5V jack of the tape-corder. For more details, refer to its Operating Instructions manual.

Connecting with Other Equipment

Connect other equipment to this tape-corder to enable flexible use of the tape-corder.

Notes on using the optional RM-D100K

- Operate this tape-corder with the AC power adaptor. Wireless remote control functions and digital input/output connections may not operate properly when the unit is operating on batteries.
- Do not leave the RM-D100K in a place subject to direct sunlight, as this may lead to a malfunction.

Using the optional system adaptor kit RM-D100K

The optional RM-D100K functions as a relay unit between an equipment with digital I/O jack and this tape-corder.

The RM-D100K supports input/output of both optical and coaxial cables. Connect according to the jack of the digital audio equipment you wish to connect.

TCD-D100

to (OPTICAL) I/O

RM-D100K → DAT deck, CD, MD, etc.

to (COAXIAL) I/O
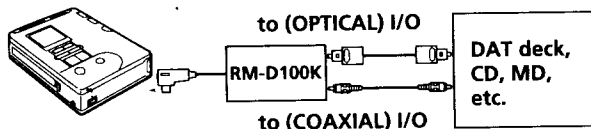
When the RM-D100K is connected

Combining the unit with a audio timer for timer recording or playback, and using the Music Scan function or Direct Search function on the supplied remote commander are many of the noteworthy features of the RM-D100K.

Note on using the SBM-1

When operating the optional SBM-1 with AC power adaptor, the power is supplied from this tape-corder if the power of the SBM-1 is turned off. When this tape-corder is operated with batteries, disconnect the AC power adaptor from the SBM-1 to conserve the battery.

Using the optional Super Bit Mapping adaptor SBM-1

The optional SBM-1 enables recording of higher quality when connected to this tape-corder.

TCD-D100

SBM-1 → Microphone (not supplied)
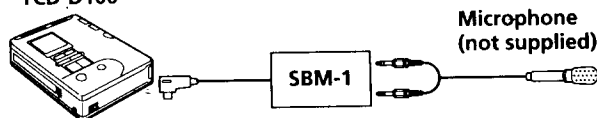
The optional RMT-D100 can be connected to the SBM-1 to enable remote control.

However, when operating the SBM-1 with the batteries, the RMT-D100 is not operational if the power of the SBM-1 is turned off. When operating the SBM-1 with the AC power adaptor, the RMT-D100 is operational regardless of whether the power of the SBM-1 is turned on or off.

Power Sources / Additional Information

Serial Copy Management System (SCMS)

The Serial Copy Management System (SCMS) which is incorporated in the domestic DAT equipments prevents repeated digital dubbing from one equipment to another. However, this system lets you record at least one generation of digital prerecorded software via digital connections.

Notes
- If the equipment used for recording is not protected with the SCMS, these rules may not apply.
- Even if digital dubbing is impossible, you can still dub tapes via analog connections.
- When digital dubbing is not possible, the message "*c0py pr0hibt*" will appear in the display.

* These source examples may not apply to some countries.

Tip
During recording, recording monitor or recording pause modes, you can confirm the copy data that is going to be written on the tape. During playback or playback pause modes, you can confirm the copy data that is written on the tape.

CD player / DAT Music tape / MD player	Digital dubbing is possible.	Digital dubbing is not possible.
	1st generation tape	2nd generation tape

BS tuner audio / HD (High Definition) TV audio / CS (Communication Satellite)* audio / SBM-1	Digital dubbing is possible.	Digital dubbing is possible.	Digital dubbing is not possible.
	1st generation tape	2nd generation tape	3rd generation tape

Microphone / Record player / Radio tuner etc.	Recording via analog inputs	Digital dubbing is possible.	Digital dubbing is not possible.
	1st generation tape	2nd generation tape	3rd generation tape

Confirming the copy data

You can confirm if digital copying is possible or not.

Hold down the RESET button during recording, recording monitor, playback, or pause modes when the tape counter is not displayed and then press the COUNTER button for more than 2 seconds.

ID 00:   Digital copying is possible as many times as you want.

ID 10:   Digital copying is not possible.

ID 11:   Digital copying is possible only once.

To clear the display , press the CLOCK, COUNTER or RESET button.

Message Display

The following messages will be displayed on the main unit while operating this unit.

Message	Description
NO TAPE	Flashes when there is no tape inside the unit.
OPEN	Flashes when the cassette compartment lid is open.
LOAD	Flashes while loading a tape.
No INPUT	Flashes when unloading a tape.
UNLOAD	Flashes when the digital input signal is not received.
COPY PROHIbT	COPY and PROHIbT appears alternately when the SCMS signal is received.
TAPE PROTECT	TAPE and PROTECT appears alternately when the ● REC button is pressed or when writing/erasing a Start ID in the playback mode using a tape whose record-protect shutter is open.
HOLD	Flashes for a moment when you set the HOLD switch to HOLD on the main unit. Appears or flashes when you press a button while the HOLD function is operating.
TOP	Flashes when the beginning of a tape*[1] is reached.
END	Flashes when the end of the tape is reached.
EE · END	Appears when the End ID*[2] is detected.
bLANK	Flashes when the unrecorded segment of a tape is detected during playback or fast-forwarding.
MIC in	Appears when the ● REC button is held down during MIC recording, recording pause, recording monitor modes.
LINE in	Appears when the ● REC button is held down during recording pause or recording monitor modes while another equipment is connected via the analog connection.
DIGITAL	Appears when the ● REC button is held down in the recording pause or recording monitor modes while another equipment is connected via the digital connection.
WRITE	Appears when the Start IDs are being written.
REHRSAL	Flashes when the Start ID is pressed during playback mode in the rehearsal function.
ERASE	Flashes when the Start IDs are being erased.
RENUM	Flashes when the program numbers are being renumbered.
AVLS	Flashes when the AVLS is set to LIMIT, or when the AVLS is operating and the VOLUME button is pressed.

m̄ R̄r̄	Appears when volume is set to the maximum level.
m̄ i N	Appears when volume is set to the minimun level.
bR̄T̄T̄ER̄y	Flashes when the batteries are weak.
iD̄6	Appears when a digital copy data is displayed. *00*: Digital copying is possible as many times as you want. *10*: Digital copying is not possible. *11*: Digital copying is possible only once.
D̄Eū	Appears when moisture condensation occurs inside the unit.

*1 Flashes when a new (virgin) tape is used for the first time.

*2 The End ID is a signal which indicates the position of a tape where the recording has ended. You cannot register the End IDs with this unit, however the unit can play back the tapes which are registered with the End IDs and detect them. When the unit detects an End ID during fast forward, it stops there. You can only forward the tape by recording from that point. When the unit detects an End ID during playback, it enters the auto-rewind mode.

Troubleshooting

Problem	Cause	Solution
The cassette compartment lid cannot be closed.	Power source is disconnected from the unit while "L OR J" or "UNL OR J" is flashing in the display.	Connect the power source and close the lid.
Operation buttons do not function. **The unit does not operate.**	The Hold function is on.	Cancel the Hold function.
	The batteries are exhausted and bR T T E R Y appears.	Replace both batteries with new ones or charge the rechargeable batteries.
	The AC power adaptor is connected incorrectly.	Connect the AC power adaptor correctly.
	The safety system is activated due to moisture condensation (" J E w " appears).	Leave the unit for a while and restart the unit by turning on the power.
	Other causes.	Disconnect the power source from the unit, then connect it again.
The tape does not move.	II PAUSE button is activated (the II indicator appears).	Press II PAUSE or ▶ PLAY button to release pause mode. (See pages 17 and 19.)
	The tape is wound completely to the end.	• Press the ◀◀ ◀◀ button to rewind the tape. • Replace the cassette.
Cannot record.	The Hold function is on.	Cancel the Hold function.
	The record-protect shutter on the cassette is open.	Close the shutter on the cassette. (See page 14.)
	Incorrect operation of the connected equipment.	See "Connecting with Other Equipment for Recording" on page 22 or refer to the Operating Instructions manual of the connected equipment.
	SCMS signal was detected.	Record via the analog connection. (See page 22.)
The sound picked up is distorted.	The sound source is too loud when using the microphone.	• Set MIC ATT switch to 20dB. • Move the microphone away from the sound source.
	The MIC/LINE IN switch is not set.	Set the sound source and the connections.
	The recording level is too loud.	Adjust the recording level (manual recording) (page 24).
Noise occurs during recording.	When monitoring the recording sound with headphones or external speakers, they are placed too close to the microphone.	Keep the microphone away from them.

Problem	Cause	Solution
Sound is not recorded on the tape.	Recording level control was set to the minimum level when recording via the analog input.	Adjust the recording level correctly. (See page 24.)
Increase of noise or deterioration of sound.	The head may be dirty.	Clean the head with the cleaning cassette.
	Recording was done with the head dirty.	Clean the head with the cleaning cassette and try again.
There is no sound.	The volume is turned down completely.	Press the + button of VOLUME to adjust the volume.
	Incorrect operation of the connected equipment.	Operate the connected equipment as instructed in the Operating Instructions manual.
	The head may be dirty.	Clean the head with the cleaning cassette.
The sound is distorted through the headphones.	The volume is too loud.	• Turn down the volume. • Set AVLS to LIMIT (page 31).
The volume cannot be adjusted.	The Hold function is on.	Cancel the Hold function.
Cannot rewind (AMS) the tape.	The Start ID is not written.	Write the Start IDs (page 26).
The tape stops suddenly during playback.	There is an unrecorded segment on the tape.	——
The clock displays 97Y4M1D/ AM12H00M00S.	The batteries were removed from the unit for a long time.	Set the clock again. (See page 12.)
Neither Start ID nor PGM number can be written.	The record-protect shutter on the cassette is open.	Close the shutter on the cassette. (See page 14.)
The Start ID is written, but the PGM number is not written.	When recording on a partially recorded tape, the most recent PGM number is not displayed before recording.	When recording on a partially recorded tape, display the PGM number before commencing recording.
Operation buttons do not work while the Start ID is being written.	While the Start ID is being written, none of the buttons except ■ STOP can be used.	Press the buttons after the START ID indicator has stopped flashing.
Absolute time cannot be written.	Recording has been started from an unrecorded segment of the tape.	Rewind the tape to the beginning, locate the end of the previous recording and start recording from that point. (See page 15.)
The battery life has become shorter	The battery life may shorten excessively depending on the temperature or the type of battery.	Use the recommended NH-D100 battery.

| Additional Information

Precautions

On safety

- Should any solid object of liquid fall into the unit, unplug the unit and have it checked by qualified personnel before operating it any further.

- To unplug the AC power adadptor, pull it out by grasping the plug. Never pull the cord itself.

- Do not put any foreign object into the DC IN 4.5 V (external power input) jack.

On power sources

- For AC operation: Use only the recommended AC power adaptor. Do not use any other AC power adaptor as it may damage the unit. For the car battery operation: Use the car battery cord DCC-E245 (not supplied).

- When the unit is not to be used for an extended period of time, be sure to disconnect the power source (batteries, AC power adaptor, car battery cord etc.) from the unit.

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself is turned off.

On batteries

- Do not charge the dry batteries.

- Do not carry the dry batteries with coins or other metallic objects. It can generate heat if the positive and negative terminals of the batteries are accidentally contacted by a metallic object.

- When you are not going to use the unit for a long time, remove the batteries to avoid damage from battery leakage and corrosion.

On tapes longer than 120 minutes

Do not use cassette tapes with playing time of over 120 minutes to record important material since such tapes are subject to the following problems:

- Sound distortion.

- Unstable tape speed after repeated AMS, rewinding, fast-forwarding, cueing or reviewing operations.

- Incorrect writing and erasing of Start IDs.

On moisture condensation

If the unit is brought directly from a cold to a warm location, moisture may condense inside the unit. In such a condition, the tape may adhere to the head drum and can be damaged, or the unit may not operate properly. Although this unit has a safety device to prevent damage from moisture condensation, remove the DAT cassette from the unit when " $\mathbb{D}E\omega$ " flashes on the display of the main unit or the 🔳 indicator flashes on the display of the remote control. When this indicator comes on, this unit enters the low-power consumption mode and " $\mathbb{D}E\omega$ " will appear in the display. Leave the unit alone for a while and then operate the unit as described below:

On battery operation

Press an operation button to exit the low-power consumption mode. When the unit recovers from the moisture condensation, " ∄Ɛɯ " will disappear from the display.

On house current

When the unit recovers from the moisture condensation, " ∄Ɛɯ " will disappear from the display automatically.

If the unit does not operate properly within a few hours, please consult your nearest Sony service center.

Always remove the DAT cassette from the unit when the unit is not to be used for an extended period of time.

On installation

- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration of shock.
- Do not place anything on top of the cabinet.
- If the unit causes interference to the radio or television reception, turn off the unit or move it away from the radio or television.

On headphones

Road safety

Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in some areas. It can also be potentially dangerous to play your headphones at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situation.

Preventing hearing damage

Avoid using headphones at high volume.
Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce volume or discontinue use.

Caring for others

Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate to the people around you.

| Additional Information

Maintenance

Cleaning the cabinet

Clean the cabinet and controls with a soft cloth slightly moistened with a mild detergent solution.

Do not use any type of abrasive pads, scouring powders or solvents such as alcohol or benzene.

Cleaning the head

Prolonged operation may cause the head to become dirty. If the head is dirty, it may cause sound dropouts during playback. To make the best possible recording and playback, we recommend you to clean the head after every ten hours of recording/playback, using the supplied cleaning cassette DT-10CLA.

Likewise, when the unit has not been used for a long period of time, clean the head with the cleaning cassette before use.

Using the supplied cleaning cassette DT-10CLA

1 Insert the cleaning cassette as you would a normal DAT cassette.
2 Press the ► PLAY button, then press the ■ STOP button after about 10 seconds.
3 Remove the cleaning cassette without rewinding it.
4 Proceed with recording and playback with a normal DAT cassette and check the sound quality.

·Notes on the cleaning cassette

• The cleaning cassette cannot be used for recording or playback.
• Do not clean the head with the cleaning cassette more than five times in succession. Cleaning the head continuously for a long period of time may cause wear to the head.
• Do not rewind the cleaning cassette each time you use it. When the cleaning cassette reaches the end of the tape, rewind it to the beginning and reuse it. The cleaning cassette can be used approximately 200 times, with 10 seconds of cleaning each time.

Additional Information

Specifications

Tape	Digital audio tape
Recording time	Standard: 120 minutes
	Long-play mode: 240 minutes (with DT-120)
Sampling frequency	48 kHz, 44.1 kHz, 32 kHz
Quantization	Standard: 16-bit linear
	Long-play mode: 12-bit non linear
Frequency response	Standard: Fs 48 kHz 20-22,000 Hz (±1.0 dB) (LINE IN)
(during playback)	Fs 44.1 kHz 20-20,000 Hz (±1.0 dB) (LINE IN)
	Fs 32 kHz 20-14,500 Hz (±1.0 dB) (LINE IN)
	Long-play mode: Fs 32 kHz 20-14,500 Hz (±1.0 dB) (LINE IN)
Signal to noise ratio	Standard: more than 87 dB
	Long-play mode: more than 87 dB
	(1 kHz IHF-A, LINE IN)
Dynamic range	Standard: more than 87 dB
	Long-play mode: more than 87 dB
	(1 kHz IHF-A, LINE IN)
Total harmonic distortion	Standard: less than 0.008% (1 kHz, 22 kHz LPF, LINE IN)
	Long-play mode: less than 0.09% (1 kHz, 22 kHz LPF, LINE IN)
Wow and flutter	Below measurable limit (less than ±0.001% W.PEAK)

Input

	Jack type	Impedance	Rated input level	Minimum input level
MIC/LINE IN	stereo minijack	MIC 4.7 kilohms LINE IN 47 kilohms	MIC 1.4 mV LINE IN 500 mV	MIC 0.3 mV LINE IN 120 mV

Output

	Jack type	Impedance	Rated output	Maximum output level	Load impedance
LINE OUT	stereo minijack	220 ohms	500 mV	—	10 kilohms
REMOTE/⌒	stereo minijack	16 ohms	87mV	20 mW + 20 mW	16 ohms

Input/Output	DIGITAL I/O REMOTE jack (special jack)
	Digital input/output, remote control operation and timer-activated operation is possible by connection with an adaptor kit to this jack.
Power requirements	• Two R6 (size AA) alkaline batteries (not supplied)
	• Two nickel metal hydride rechargeable battery
	DC IN 4.5 V jack accepts:
	the Sony AC power adaptor AC-E45HG
	the car battery cord DCC-E245 (not supplied) for use with 12V/24V car battery.
Battery life	See "Replacing the batteries" (page 34).
Power consumption	0.9 W
Dimension	Approx. 80 x 29.2 x 117.3 mm (3¼ x 1½ x 3½ in) (w/h/d) not incl. projecting parts and controls
Mass	Main unit: Approx. 290 g (10.3 oz.)
	When using the main unit: Approx. 395 g (14 oz.) incl. headphones with remote control, rechargeable batteries and a cassette

Supplied accessories
- AC power adaptor AC-E45HG* (1)
- Charger adaptor BC-D100* (1)
- Nickel Metal Hydride Rechargeable battery NH-D100* (2)
- Headphones with a remote control (1)
- DAT cleaning cassette DT-10CLA (1)
- Carrying case (1)
* These accessories may be supplied to certain models.

Design and specifications are subject to change without notice.

Optional accessories
- AC Adaptor AC-E45 HG
- Nickel Metal Hydride Rechargeable battery NH-D100
- Car battery cord DCC-E245
- Car connecting pack CPA-9
- Wired remote commander RMT-D100
- System adaptor kit RM-D100K
- Digital cable POC-DA12P (rectangular-shaped optical plug), POC-DA12MP (optical miniplug input), POC-DA12SP (optical miniplug output), RK-DA10P (coaxial)
- Audio connecting cord RK-G129
- Stereo microphone ECM-MS957, ECM-MS907, ECM-717 (plug-in power system)
- Stereo earphones MDR-E868, MDR-E888
- Stereo headphones MDR-D77, MDR-D55
- Active speaker system SRS-88
- Super Bit Mapping adaptor SBM-1
- DAT cleaning cassette DT-10CLA

Your dealer may not handle some of the above listed accessories. Please consult your dealer for more information.

■ Additional Information